Please amend the claims as follows:

1. (original) A method of encoding a main and a side signal, where at least said main and side signal represent a multichannel audio signal, where the main and side signal have the properties that the relation between the power spectral energies of said main and side signal is intact per psycho-acoustical band and where said side signal is psycho acoustically uncorrelated with the main signal. The method of encoding the main and the side signal comprises the steps of:

- transforming the side signal by a predetermined transformation into a set of transformations parameters, said parameters being adapted for reproducing a third signal corresponding to the side signal and having said properties of the side signal,

- representing the multichannel signal at least by said main signal and said transformation parameters.

2. (original) A method according to claim 1, wherein the predetermined transformation comprises the step of:

- generating a set of transformation parameters from the main and the side signal, where said transformation parameters define the

relationship between the spectra of the main and the side
signal.

3. (currently amended) A method according to claim 1 2, wherein
the step of generating the transformation parameters comprises the
steps of:

- performing linear prediction on both said main signal and said
  side signal resulting in two sets of prediction coefficients, a
  first set comprising coefficients corresponding to the main
  signal and a second set comprising coefficients corresponding to
  the side signal,
- determining the energy of the side signal,
said transformation parameters comprising said prediction
coefficients and said determined energy.

4. (currently amended) A method according to claim 1 2, wherein
the step of generating the transformation parameters comprises the
steps of:
- determining the amplitude spectra of the main and the side
  signal,
- determining the ratios between the determined amplitude spectras
  of the main and the side signal,

- generating prediction coefficients by using information based on

    the determined ratios as input to a prediction system,

- determining the energy of the side signal,

- said transformation parameters comprising said prediction

    coefficients and said determined energy.

5.   (currently amended)   A method according to claim 1-2, wherein

the step of generating the transformation parameters comprises the

steps of:

performing linear prediction on the side signal resulting in a set

of prediction coefficients comprising coefficients corresponding to

the side signal,

determining the temporal envelope for the side signal,

said transformation parameters comprising said prediction

coefficients and said determined temporal envelope.

6.   (currently amended)   A method according to claim 1-5, wherein

transforming the side signal into a set of transformation

parameters is performed on overlapping segments of at least the

side signal and by determining transformation parameters

corresponding to each segment.

7. (original) A method of decoding main and side signal information, where at least said main and side signal represent a multichannel audio signal, the main and side signal have the properties that the relation between the power spectral energies of said main and side signal is intact per psycho-acoustical band and where said side signal is psycho acoustically uncorrelated with the main signal, the method comprises the steps of:

- receiving a main signal and a set of transformation parameters, said transformation parameters being adapted for reproducing a third signal corresponding to the side signal and having the same properties as the side signal,

- generating the third signal having the said properties of the side signal by using said transformation parameters for inversely performing the predetermined transformation.

8. (original) A method according to claim 7, wherein the step of generating the third signal comprises the steps of:

- generating a white noise sequence,

- generating a first signal by filtering the white noise sequence in a linear prediction filter defined by the prediction coefficient corresponding to the side signal, said prediction coefficients comprised in the received transformation parameters,

- attenuating the second signal until the energy of the second signal corresponds to the determined energy of the side signal, said determined energy being comprised in said received transformation parameters.

9.   (original)   A method according to claim 7, wherein the step of generating the third signal comprises the steps of:

- generating a temporal signal in which the spectral energy relation between the temporal signal and the main signal corresponds to the spectral energy relation between the main signal and the side signal, said temporal signal being generated by filtering the main signal using the transformation parameters as filter parameters,

- filtering the temporal signal ensuring that the output signal is psycho acoustically uncorrelated with the main signal.

10.   (original)   A method according to claim 9, wherein the step of generating the temporal signal comprises the steps of:

- generating a first signal by filtering the main signal in a linear prediction analysis filter defined by the prediction coefficient corresponding to the main signal, said prediction coefficients comprised in the received transformation parameters,

- generating a second signal by filtering said first signal in a linear prediction synthesis filter defined by the prediction coefficients corresponding to the side signal comprised in the received transformation parameters,

- attenuating the second signal until the energy of the signal corresponds to the determined energy of the side signal, said determined energy being comprised in said received transformation parameters.

11. (original) A method according to claim 9, wherein the step of generating the temporal signal comprises the steps of:

- generating a first signal by filtering the main signal in a linear prediction filter defined by the prediction coefficient, where said prediction coefficients are comprised in the transformation parameters, said prediction coefficients having been generated by

• determining the ratios between the determined amplitude spectras of the main and the side signal,

• performing an inverse Fourier transformation of the determined ratios,

• using the result of the inverse Fourier transformation as input to a prediction system.

– attenuating the second signal until the energy of the signal

corresponds to the determined energy of the side signal, said

determined energy being comprised in said transformation

parameters.

said transformation parameters comprising said prediction

coefficients and said determined energy.

12. (currently amended) A method according to claim 7~~-11~~, wherein

when the transformation parameters has been generated corresponding

to specific segments, then the step of generating the third signal

having the same properties as the side is performed by initially

interpolating transformation parameters between the specific

segments.

13. (original) An arrangement for encoding a main and a side

signal, where at least said main and side signal represent a

multichannel audio signal, where the main and side signal have the

properties that the relation between the power spectral energies of

said main and side signal is intact per psycho-acoustical band and

where said side signal is psycho acoustically uncorrelated with the

main signal, the arrangement comprising:

– first processing means for transforming the side signal by a

predetermined transformation into a set of transformation

parameters, said parameters being adapted for reproducing a third signal corresponding to the side signal and having the same properties as the side signal,

- second processing means adapted to represent the multichannel signal at least by said main signal and said transformation parameters.

14. (original) An arrangement for decoding main and side signal information, where at least said main and side signal represent a multichannel audio signal, the main and the side signal have the properties that the relation between the power spectral energies of said main and side signal is intact per psycho-acoustical band and where said side signal is psycho acoustically uncorrelated with the main signal, the method comprises the steps of:

- receiving means for receiving a main signal and a set of transformations parameters, said transformation parameters being adapted for reproducing a third signal corresponding to the side signal and having the same properties as the side signal,

- processing means for generating the third signal having the same properties as the secondary signal by using said transformation parameters for inversely performing the predetermined transformation.

15. (currently amended) A data signal including multichannel signal information, the data signal being encoded by a method of encoding according to claim 1–6.

16. (currently amended) A computer-readable medium comprising a data record indicative of multichannel signal information encoded by a method of encoding according to claim 1–6.

17. (original) A device for communicating a multichannel signal, the device comprises an arrangement for encoding a main and a side signal, where at least said main and side signal represent a multichannel audio signal, where the main and side signal have the properties that the relation between the power spectral energies of said main and side signal is intact per psycho-acoustical band and where said side signal is psycho acoustically uncorrelated with the main signal, the arrangement comprising:

- first processing means for transforming the side signal by a predetermined transformation into a set of transformation parameters, said parameters being adapted for reproducing a third signal corresponding to the side signal and having the same properties as the side signal,

- second processing means adapted to represent the multichannel signal at least by said main signal and said transformation parameters.